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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,756	10/24/2001	Patricia A. Beck	10003472-1	4353

7590 08/09/2005

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

CHU, JOHN S Y

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/001,756

Applicant(s)

BECK ET AL.

Examiner

John S. Chu

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,6 and 8-45 is/are pending in the application.
- 4a) Of the above claim(s) 16-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6,8 and 9 is/are rejected.
- 7) ☒ Claim(s) 10-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This Office action is in response to the amendment May 12, 2005.

1. The rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is **withdrawn** in view of the amendment by applicant in the response of May 12, 2005.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by VAN ALLAN et al.

The claimed invention has been amended to reflect the following:

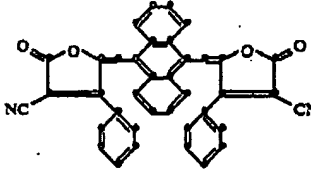
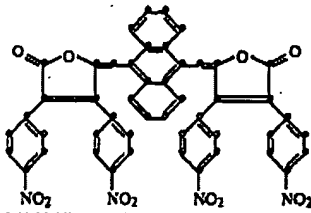
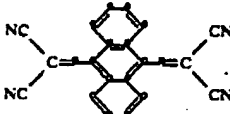
1. (currently amended) A bistable molecule for a multiple electrode device, said multiple electrode device comprising at least one pair of electrodes that form at least one junction and at least one said bistable molecule connecting said pair of electrodes in said junction, said junction having a functional dimension in nanometers or micrometers, said bistable molecule including at least one photosensitive functional group, wherein said bistable molecule comprises a main chain and at least one pendant group and wherein at least one photosensitive functional group is attached either to said main chain or to said pendant group, said bistable molecule exhibiting bistability irrespective of the presence or absence of said at least one photosensitive group.

VAN ALLAN et al (4,282,354) discloses an electrophoretic migration imaging process wherein compounds used in the process are photosensitive and responds to an electric field.

Here the charge-bearing particles are subjected to the influence of an electric field when

Art Unit: 1752

exposed to activating radiation. As a result of the process, the particles migrate to electrophoretically within a medium to the surface of one of the electrodes, see the discussion in the Background of the Invention in the patent found at column 1, lines 34-64. The specific compounds are include in column 4, line 40 – column 6, line 57. A few compounds are exemplified here below from VAN ALLAN et al:

TABLE I	
Material:	
1.	5,5'-(9,10-anthracenediylidimethyldiynyl)bis[3-cyano-4-phenyl-(5H)-furan-2-one]
	
2.	5,5'-(9,10-anthracenediylidimethyldiynyl)bis[3,4-di-(p-nitrophenyl)-(5H)-furan-2-one]
	
3.	9,10-bis(dicyanoethyl)anthracene
	

These compounds seen in VAN ALLAN et al anticipate the recited scope for the claimed bistable molecule wherein these compounds possess a main chain and at least one pendant group. The reference clearly states that these compounds are photosensitive and show a bistable property by altering their charge upon exposure to light. Thus the prior art reference is seen to anticipate the broadly recited bistable molecule recited in claim 1.

The arguments by applicant have been fully considered, however the examiner notes that the structure of the compounds in Table 1 look to be bistable wherein the conjugated aromatic

Art Unit: 1752

ring can twist or rotate and have a different conductivity so as to meet the claimed bistable limitation as recited in claim 1 and would not depend only its bistability based on the photosensitive group on the compound.

The rejection is repeated.

7. Claims 10-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art references of record disclose the claimed species having the structures as recited in claims 11-15. Currently the generic claims 1-10 are written in broad form wherein none of the allowed species are recited, upon writing claims 11-15 in independent form those claims would be seen as allowable.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

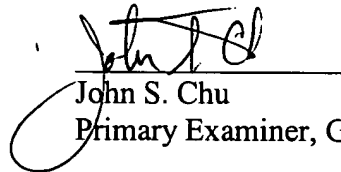
The fax phone number for the USPTO is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR

Art Unit: 1752

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John S. Chu  
Primary Examiner, Group 1700

J.Chu  
August 6, 2005